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| 09/977,318 | 10/16/2001 | Yasuo Fukuda | 35.C15887 | 4684 |

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| EXAMINER |
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LAROSE, COLIN M

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| ART UNIT | PAPER NUMBER |
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2624

DATE MAILED: 04/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I (claims 1-3, 19-21, 36, and 38) in the reply filed on 9 March 2006 is acknowledged.

Arguments and Amendments

2. Applicant's amendments and arguments filed 23 November 2005, have been entered and made of record.

Response to Amendments and Arguments

3. Applicant's arguments with respect to independent claims 1, 19, 36, and 38 have been fully considered but they are not persuasive for the following reasons.

Regarding claim 1, Applicant asserts that "Girod does not extract a second image characteristic from the image" because Girod merely utilizes "an original of the image." (see Applicant's Remarks, p. 16). Examiner respectfully disagrees with this assertion.

In figure 4 of Girod, two characteristic amounts, one corresponding to an original image block and the other corresponding to an inverse DCT of a subset of DCT coefficients of the block, are extracted and then compared to each other at block 413. Thereafter, one of the characteristic amounts is selected as the desired characteristic, and processing continues on the basis of which characteristic was selected – that is, either the full DCT or the 3-coefficient DCT is utilized based on which characteristic amount was selected.

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Examiner interprets Girod's "input block" extracted from the original image as corresponding to the claimed "second image characteristic." Such an interpretation is considered reasonable, and Applicant has not provided persuasive reasoning or evidence as to why an "image characteristic" does not read on a "block of image data."

Independent claims 19, 36, and 38 contain limitations substantially the same as those of claim 1, and the above remarks apply to these claims.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claim 38 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows:

Claim 38 defines a "signal" adapted * * * to represent a command sequence carried out by an image processing method characterized by functional descriptive material. While functional descriptive material may be claimed as a statutory product (i.e., a "manufacture") when embodied on a tangible computer readable medium, a "signal" per se does not fall within any of the four statutory classes of 35 U.S.C. §101. A "signal" is not a process because it is not a series of steps per se. Furthermore, a "signal" is not a "machine", "composition of matter" or a "manufacture" because these statutory classes "relate to structural entities and can be grouped as 'product' claims in order to contrast them with process claims." (1 D. Chisum, Patents § 1.02 (1994)).

Machines, manufactures and compositions of matter are embodied by physical structures or material, whereas a “signal” has neither a physical structure nor a tangible material. That is, a “signal” is not a “machine” because it has no physical structure, and does not perform any useful, concrete and tangible result. Likewise, a “signal” is not a “composition of matter” because it is not “matter”, but rather a form of energy. Finally, a “signal” is not a “manufacture” because all traditional definitions of a “manufacture” have required some form of physical structure, which a claimed signal does not have.

A “manufacture” is defined as “the production of articles for use from raw materials or prepared materials by giving to these materials new forms, qualities, properties, or combinations, whether by hand-labor or by machinery.” *Diamond v. Chakrabarty*, 447 U.S. 303, 308, 206 USPQ 193, 196-97 (1980) (quoting *American Fruit Growers, Inc. v. Brogdex Co.*, 283 U.S. 1, 11, 8 USPQ 131, 133 (1931)).

Therefore, a “signal” is considered non-statutory because it is a form of energy, in the absence of any physical structure or tangible material, that does not fall within any of the four statutory classes of 35 U.S.C. §101.

NOTE: Refer to Annex IV, section (c) of the USPTO “Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility”, Official Gazette notice of 22 November 2005 (currently at <http://www.uspto.gov/web/offices/com/sol/og/2005/week47/patgupa.htm>).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2, 19, 20, 36, and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,822,003 by Girod et al. (“Girod”).

Regarding claims 1, 19, 36, and 38, Girod discloses an image processing apparatus/method/storage medium/computer instructions (figure 4) and means (PC 101, figure 1) for performing:

an extracting step for extracting a first image characteristic amount (block 407: obtains the inverse DCT values for a reduced number of DCT coefficients (i.e. 3 coefficients) and performs an inverse DCT -- the reconstructed image is utilized as a “first image characteristic amount”) and a second image characteristic amount (i.e. the “input block,” which is a block of image data extracted from the image, is used as a “second image characteristic amount” – see column 6, lines 39-42) from an image, the second image characteristic amount being larger than the first image characteristic amount (i.e. Girod’s second image characteristic amount has a higher resolution than the first characteristic amount since none of the high-frequency components are removed therefrom, and is therefore “larger” than the first image characteristic amount);

a judging step (block 413) for judging similarity between the first image characteristic amount and the second image characteristic amount extracted by said extracting step; and

a selecting step (block 413) for selecting either the first image characteristic amount or the second image characteristic amount as a characteristic amount of the image

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in accordance with a judging result of said judging step (i.e. block 413 selects either the reduced reconstructed-image values or the full input block as a characteristic amount of the image, and then processes the image accordingly).

Regarding claims 2 and 20, Girod discloses an image processing apparatus according to claim 1, wherein, if said judging means judges that the image characteristic amounts are similar to each other, said selecting means selects the first image characteristic amount, and, if said judging means judges that the image characteristic amounts are not similar to each other, said selecting means selects the second image characteristic amount (see column 8, lines 6-16).

Allowable Subject Matter

7. Claims 3 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 3 and 21, the combination of Girod and Applicant's Admitted Prior Art ("Admission") are silent to the second image characteristic amount being obtained by scaling the image and by effecting DCT processing and quantization processing on the scaled image and by extracting several coefficients among coefficients obtained by a processing result from a low frequency component side.

Girod discloses that the second image characteristic amount corresponds to an "input block" than has not been subjected to scaling, DCT processing, or quantization, and Admission does not cure the deficiencies of Girod.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colin M. LaRose whose telephone number is (571) 272-7423. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu, can be reached on (571) 272-7429. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2600 Customer Service Office whose telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Colin LaRose
Group Art Unit 2624
4 April 2006